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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Sheet **1** of **3****Complete if Known**

Application Number	09/734,953
Filing Date	December 11, 2000
First Named Inventor	Bruce M. Schena
An Unit	2672
Examiner Name	Jeffery A. Brier
Attorney Docket Number	IMMR036/01US

U.S. PATENT DOCUMENTS					
Examiner	Cite No. <sup>1</sup>	Document Number Number Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
<i>JB</i>		6,422,941	7/23/2002	Thomer et al.	
<i>JB</i>		6,160,489	12/12/2000	Perry et al.	
<i>JB</i>		6,111,577	8/29/2000	Zilles et al.	
<i>JB</i>		5,690,582	11/25/1997	Ulrich et al.	
<i>JB</i>		5,575,761	11/19/1996	Hajianpour	
<i>JB</i>		5,437,607	8/1/1995	Taylor	
<i>JB</i>		5,436,622	7/25/1995	Gutman et al.	
<i>JB</i>		5,283,970	2/8/1994	Aigner	
<i>JB</i>		5,186,695	2/16/1993	Mangseth et al.	
<i>JB</i>		5,175,459	12/29/1992	Danial et al.	
<i>JB</i>		5,165,897	11/24/1992	Johnson	
<i>JB</i>		5,022,384	6/11/1991	Freels	
<i>JB</i>		4,885,565	12/5/1989	Embach	
<i>JB</i>		4,484,191	11/20/1984	Vavra	
<i>JB</i>		4,464,117	8/7/1984	Foerst	
<i>JB</i>		4,333,070	6/1/1982	Barnes	
<i>JB</i>		4,262,549	4/21/1981	Schwellenbach	
<i>JB</i>		4,127,752	11/28/1978	Lowthorp	
<i>JB</i>		2,972,140	2/14/1961	Hirsch	

Examiner  
Signature*Jeffery A. Brier*Date  
Considered*8/25/2005*

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(1 of 2)

PTO/SB/08A (10-01)

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Attorney Docket Number	IMMR036/01US

**OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
		PATRICK, "Design, Construction, and Testing of a Fingertip Tactile Display for Interaction with Virtual and Remote Environments," <i>Master of Science Thesis</i> , MIT, Aug. 1990, archived Nov. 8, 1990.
		CALDER, "Design of A Force-Feedback Touch-Introducing Actuator For Teleoperator Robot Control," <i>Bachelor of Science Thesis</i> , MIT, May 1983, archived June 23, 1983.
		WIKER, "Teletouch Display Development: Phase 1 Report," <i>Technical Report 1230</i> , Naval Ocean Systems Center, San Diego, July 1988.
		BLISS, "Optical-to-Tactile Image Conversion for the Blind," <i>IEEE Transactions on Man-Machine Systems</i> , Vol. MMS-11, No. 1, March 1970.
		JOHNSON, "Shape-Memory Alloy Tactile Feedback Actuator," <i>Armstrong Aerospace Medical Research Laboratory</i> , AAMRL-TR-90-039, August, 1990.
		KONTARINIS et al., "Tactile Display of Vibratory Information in Teleoperation and Virtual Environments," <i>PRESENCE</i> , 4(4):387-402, Harvard Univ., 1995.
		AUKSTAKALNIS et al., "Silicon Mirage: The Art and Science of Virtual Reality," ISBN 0-938151-82-7, pp. 129-180, 1992.
		EBERHARDT et al., "Inducing Dynamic Haptic Perception by The Hand: System Description and Some Results," <i>DSC-Vol. 55-1, Dynamic Systems and Control</i> , Volume 1, ASME 1994.
		GOBEL et al., "Tactile Feedback Applied to Computer Mice," <i>International Journal of Human-Computer Interaction</i> , Vol. 7, No. 1, pp. 1-24, 1995.
		PIMENTEL et al., "Virtual Reality: through the new looking glass," 2 <sup>nd</sup> Edition; McGraw-Hill, ISBN 0-07-050167-X, pp. 41-202, 1994.
		"Cyberman Technical Specification," <i>Logitech Cyberman SWIFT Supplement to Logitech Mouse Technical Reference and Programming Guide</i> , 4/5/1994.
		OUHYOUNG et al., "The Development of A Low-Cost Force Feedback Joystick and Its Use in the Virtual Reality Environment," <i>Proceedings of the Third Pacific Conference on Computer Graphics and Applications, Pacific Graphics '95</i> , Seoul, Korea, 21-24 August 1995.
		KACZMAREK et al., "Tactile Displays," <i>Virtual Environment Technologies</i> , Chap. 9, pp. 349-414.
		LAKE, "Cyberman from Logitech," at <a href="http://www.ibiblio.org/GameBytes/issue21/greviews/cyberman.html">http://www.ibiblio.org/GameBytes/issue21/greviews/cyberman.html</a> , 1994.
		YAMAKITA et al., "Tele-Virtual Reality of Dynamic Mechanical Model," <i>Proceedings of the 1992 IEEE/RSJ International Conference on Intelligent Robots and Systems</i> , Raleigh, NC, July 7-10, 1992.

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Considered

8/25/2005

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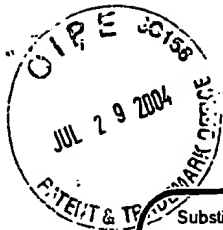
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
		NOLL, "Man-Machine Tactile," <i>SID Journal</i> , July/August 1972 Issue.
		ROSENBERG, "Virtual Fixtures: Perceptual Overlays Enhance Operator Performance In Telepresence Tasks," <i>Ph.D. Dissertation</i> , Stanford University, June 1994.

Examiner Signature	<i>Jeffery A. Brier</i>	Date Considered	8/25/2005
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Sheet 1 of 7

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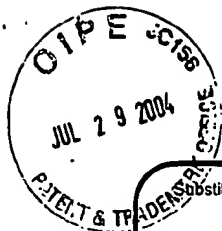
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Examiner	Cite No. <sup>1</sup>	Document Number Number Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
DB		5,799,108	08/1998	Salcudean et al.	
DB		5,623,642	04/1997	Katz et al.	
DB		5,591,924	01/1997	Hilton	
DB		5,589,828	12/1996	Armstrong	
DB		5,576,727	11/1996	Rosenberg et al.	
DB		5,570,111	10/1996	Barrett et al.	
DB		5,512,919	04/1996	Araki	
DB		5,467,763	11/1995	McMahon et al.	
DB		5,459,382	10/1995	Jacobus et al.	
DB		5,451,924	09/1995	Massimino et al.	
DB		5,445,166	08/1995	Taylor	
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DB		5,436,640	07/1995	Reeves	
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DB		5,396,267	03/1995	Bouton	
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DB		5,384,460	01/1995	Tseng	
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DB		5,290,276	03/1994	Kwok	
DB		5,275,565	01/1994	Moncrief	
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DB		5,259,120	11/1993	Chapman et al.	
DB		5,251,156	10/1993	Heier et al.	
DB		5,251,127	10/1993	Raab	
DB		5,243,266	09/1993	Kasagami et al.	
Examiner Signature	Jeffery A. Brier		Date Considered	8/25/2005	

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Art Unit	2672
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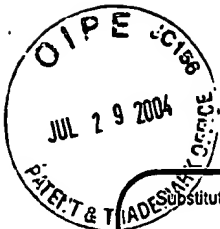
U.S. PATENT DOCUMENTS					
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JB		5,230,623	07/1993	Guthrie et al.	
JB		5,209,131	05/1993	Baxter	
JB		5,204,824	04/1993	Fujimaki	
JB		5,189,806	03/1993	McMurtry et al.	
JB		5,187,874	02/1993	Takahashi et al.	
JB		5,184,319	02/1993	Kramer	
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JB		5,178,012	01/1993	Culp	
JB		5,148,377	09/1992	McDonald	
JB		5,143,505	09/1992	Burdea et al.	
JB		5,142,506	08/1992	Edwards	
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JB		5,132,672	07/1992	Clark	
JB		5,131,844	07/1992	Marinaccio et al.	
JB		5,128,671	07/1992	Thomas, Jr.	
JB		5,126,948	06/1992	Mitchell et al.	
JB		5,116,051	05/1992	Monocrief et al.	
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JB		4,983,786	01/1991	Stevens et al.	
JB		4,982,504	01/1991	Soderberg et al.	
JB		4,962,591	10/1990	Zeller et al.	
JB		4,961,267	10/1990	Herzong	
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Examiner Signature	Jeffery A. Brier	Date Considered	8/25/2005
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AB		4,891,889	01/1990	Tomelleri	
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QB		4,653,011	03/1987	Iwano	
QB		4,638,798	01/1987	Shelden et al.	
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QB		4,216,467	08/1980	Colston	
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Signature

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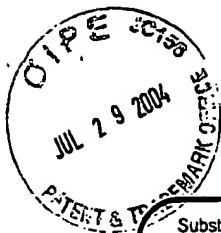
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JB		3,795,150	03/1974	Eckhardt	
JB		3,531,868	10/1970	Stevenson	
JB		3,490,059	01/1970	Paulsen et al.	
JB		2,906,179	09/1959	Bower	

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JB		JP	4-34610		05/1990		
JB		WIPO	WO95/02233		01/1995		
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JB		WIPO	WO95/32459		11/1995		
		WIPO	WO95/16397		05/1996		
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JB		WIPO	WO9502801		01/1995		
JB		WIPO	WO9622591		07/1996		

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Jeffery A. Brier

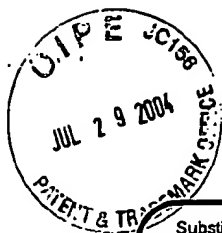
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Substitute for form 1449A/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Application Number	09/734,953
		Filing Date	December 11, 2000
		First Named Inventor	Bruce M. Schena
		Art Unit	2672
		Examiner Name	Jeffery A. Brier
Sheet 5 of 7	Attorney Docket Number	IMMR036/01US	

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
		WINEY III, "Computer Simulated Visual and Tactile Feedback as an Aid to Manipulator and Vehicle control", Massachusetts Institute of Technology, 1981.	
		TAN, HONG Z., "Human Factors for the Design of Force-Reflecting Haptic Interfaces", Tan, Srinivasan, Eberman, & Cheng, ASME WAM '94.	
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Sheet 6 of 7	Attorney Docket Number	IMMR036/01US	

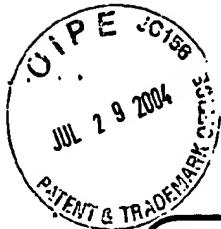
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		KOTOKU, TETSUO et al., "Environment Modeling for the Interactive Display (EMID) Used in Telerobotic Systems," IEEE Nov. 3-5, 1991, pp. 99-1004.
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		<del>*Foot Operated Mouse,* IBM Technical Disclosure Bulletin, Apr. 1986, vol. 28, No. 11.</del>	

Examiner Signature	<i>Jeffery A. Brier</i>	Date Considered	8/25/2005
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